

IN THE CLAIMS

Please amend the claims as follows:

Claim 1. (Previously Presented): A monolithic semiconductor-piezoelectric structure comprising:

a substrate of a first monocrystalline silicon semiconductor material;

a strain-relief material layer overlying said monocrystalline silicon semiconductor substrate and comprising an amorphous oxide material in contact with the monocrystalline silicon substrate and a monocrystalline metal oxide selected from the group consisting of alkaline earth metal titanates, alkaline earth metal zirconates, alkaline earth metal hafnates, alkaline earth metal tantalates, alkaline earth metal ruthenates, alkaline earth metal niobates, alkaline earth metal vanadates, alkaline earth metal tin-based perovskites, lanthanum aluminate, lanthanum scandium oxide, gadolinium oxide and mixtures thereof contacting the amorphous oxide material;

a piezoelectric material overlying said strain-relief material layer; and

an electro-acoustic device at least partially in at least a portion of said piezoelectric material.

Claim 2. (Cancelled)

Claim 3. (Original): The semiconductor-piezoelectric structure of claim 1 wherein said piezoelectric material is a metallic oxide.

Claim 4. (Original): The semiconductor-piezoelectric structure of claim 1 wherein said piezoelectric material is lithium niobate.

Claim 5. (Original): The semiconductor-piezoelectric structure of claim 1 wherein said piezoelectric material is lithium tantalate.

Claim 6. (Previously Presented): The semiconductor-piezoelectric structure of claim 1 wherein said strain-relief material comprises $\text{Sr}_z\text{Ba}_{1-z}\text{TiO}_3$, where z has a value chosen between 0 and 1.

Claim 7. (Cancelled)

Claim 8. (Cancelled)

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Claim 9. (Previously Presented): The semiconductor-piezoelectric structure of claim 1 wherein said amorphous oxide is an oxide of silicon.

Claim 10. (Original): The semiconductor-piezoelectric structure of claim 1 wherein said electro-acoustic device is a passive surface acoustic wave device.

Claim 11. (Original): The semiconductor-piezoelectric structure of claim 1 wherein said electro-acoustic device is an active device.

Claim 12. (Original): The semiconductor-piezoelectric structure of claim 11 wherein said active device comprises an acoustic charge transport device.

Claim 13. (Original): The device of claim 12 wherein a substantial portion of charge transfer through said acoustic charge transport device is through a semiconductor substrate region proximate to said piezoelectric layer.

Claim 14. (Original): The device of claim 12 wherein traveling potential wells transport charge in said device, and wherein said potential wells are piezoelectrically coupled to an acoustic wave transduced in said piezoelectric layer.

Claim 15. (Original): The monolithic semiconductor-piezoelectric structure of claim 1, further comprising:

at least one semiconductor device formed in a semiconductor portion of said substrate; and

at least one electrical connection between one of said semiconductor devices and said electro-acoustic device.

Claims 16-84. (Cancelled)